



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**D135-751-011**  
**Job Sheet 192019**



**Part No:** D135-751-011

**Job Qty:** 1 pcs

**Part Name:** Skidtube with Standard Wearplates Fits LH or RH



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 3/14/19

**Job Tracking No:**

**Due Date:** 4/2/19

**Created By:** Marie Lajeunesse

**Type:** SOLD

**Description:** order 9622

**Note:** DWG DSI 9661 REV A, D3507 REV D IPP Rev:A 44353 New Issue JLM IPP Rev:B 06-12-18 As per Rev B JLM IPP Rev:C 07-12-11 ECN 1036 as per revB DD IPP Rev D 08.11.04 Added DT9431 to sequence 5 EC verf DD IPP Rev E 10.02.22 per PAR 09-043 EC verified: DD IPP Rev:F 10.06.09 remove seq110 DD verf:EC IPP Rev G 10.09.17 added D3507-1-bent EC verified:DD IPP REV:H 13.12.11 ECN13-619/ CHG002 DD VERF:JLM

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation                   | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off         |
|-------|-----------------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|------------------|
|       |                             |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |                  |
| 90    | Start up Operation          | 1 Ea  | 4/2/19     | 4/2/19   | 0.00      | 0.00    | Start Up Skid tubes-1 |           | SE               |
| 120   | Skid tubes                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.80    | Skid tubes-1          |           | BE               |
| 140   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC5                   |           | 19.03-25         |
| 150   | HandFinish                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.33    | HandFinish1           |           | DR 19/03/26      |
| 160   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC7-1                 |           | BE               |
| 170   | Skid tubes                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 1.00    | Skid tubes-1          |           | BE               |
| 180   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC10                  |           | 19.03-29         |
| 185   | HandFinish                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.10    | HandFinish6           |           | DR 19/03/29      |
| 187   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC7-1                 |           | M64              |
| 190   | Skid tubes                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.77    | Skid tubes-1          |           | DAS 40           |
| 200   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC5                   |           | APR 03 2019 9:89 |
| 210   | HandFinish                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.08    | HandFinish2           |           | DR 19/04/03      |
| 215   | Outsource                   | 1 pcs | 4/2/19     | 4/2/19   |           |         | ATE003-VC             | 5         | NR               |
| 220   | SprayPaint                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.25    | Spray Paint           |           | RD 19-4-6        |
| 230   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC14                  |           | 19-4-8           |
| 260   | HandFinish                  | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.74    | HandFinish4           |           | 19-4-8           |
| 270   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC5                   |           | APR 09 2019 68   |
| 280   | Packaging                   | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | Packaging1-1          |           | APR 09 2019 68   |
| 290   | QC                          | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | QC4                   |           | APR 09 2019 69   |
| 300   | Packaging 3-1 - Stock - B4B | 1 pcs | 4/2/19     | 4/2/19   | 0.00      | 0.00    | Packaging 3 - 1 - B4B |           | APR 09 2019 9-89 |
|       |                             |       |            |          |           |         | Packaging 3 - 2 - B4B |           | 6                |
|       |                             |       |            |          |           |         | Packaging 3 - 3 - B4B |           | 9-89             |
|       |                             |       |            |          |           |         | Packaging 3 - 4 - B4B |           |                  |
|       |                             |       |            |          |           |         | Packaging 3 - 5 - B4B |           |                  |
|       |                             |       |            |          |           |         | Packaging 3 - 6 - B4B |           |                  |
|       |                             |       |            |          |           |         | Packaging 3 - 7 - B4B |           |                  |
|       |                             |       |            |          |           |         | Packaging 3 - 8 - B4B |           |                  |
|       |                             |       |            |          |           |         | Packaging 3 - 9 - B4B |           |                  |

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Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
CANADA  
TEL.: 1 813 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

Container No: S163591



Part: D135-751-011

Job No: 192019

Serial No/Batch: S163591

Revision:

Inspector:

Exp Date:

Instructions: FAA STC SR01709SE 18/10/17, TC LoA RDIMS-9661680-v1 14/07



|                |       |        |           |                        |      |
|----------------|-------|--------|-----------|------------------------|------|
|                |       |        |           | Packaging 3 - 10 - B4B |      |
|                |       |        |           | Packaging 3 - 11 - B4B |      |
|                |       |        |           | Packaging 3 - 12 - B4B |      |
|                |       |        |           | Packaging 3 - 13 - B4B |      |
|                |       |        |           | Packaging 3 - 14 - B4B |      |
|                |       |        |           | Packaging 3 - 15 - B4B |      |
|                |       |        |           | Packaging 3 - 16 - B4B |      |
|                |       |        |           | Packaging 3 - 17 - B4B |      |
|                |       |        |           | Packaging 3 - 18 - B4B |      |
|                |       |        |           | Packaging 3 - 19 - B4B |      |
|                |       |        |           | Packaging 3 - 20 - B4B |      |
|                |       |        |           | Packaging 3 - 21 - B4B |      |
|                |       |        |           | Packaging 3 - 22 - B4B |      |
|                |       |        |           | Packaging 3 - 23 - B4B |      |
|                |       |        |           | Packaging 3 - 24 - B4B |      |
|                |       |        |           | Packaging 3 - 25 - B4B |      |
|                |       |        |           | Packaging 3 - 26 - B4B |      |
|                |       |        |           | Packaging 3 - 27 - B4B |      |
|                |       |        |           | Packaging 3 - 28 - B4B |      |
|                |       |        |           | Packaging 3 - 29 - B4B |      |
|                |       |        |           | Packaging 3 - 30 - B4B |      |
|                |       |        |           | Packaging 3 - 31 - B4B |      |
|                |       |        |           | Packaging 3 - 32 - B4B |      |
|                |       |        |           | Packaging 3 - 33 - B4B |      |
|                |       |        |           | Packaging 3 - 34 - B4B |      |
|                |       |        |           | Packaging 3 - 35 - B4B | DAS  |
|                |       |        |           | Packaging 3 - 36 - B4B | 21   |
| 305 DC         | 1 pcs | 4/2/19 | 0.00 0.00 | DC                     | 21   |
| 310 QC 21 - FG | 1 pcs | 4/2/19 | 0.00 0.00 | QC 21 - FG - 21        | 21   |
|                |       |        |           | QC 21 - FG - 70        | 9-89 |
|                |       |        |           | QC 21 - FG - 53        |      |

APR 09 2019

APR 09 2019

Part Op 120 - 1-Cut Aft end as per dwg D3507 3-Drill Aft & Fwd Cap holes using DT8678 & DT8901 4-Locate DT8870 & Drill Descriptions: Ground wire hole on top of Tube. 6-Locate DT8870 with #30 cleco in Ground wire hole ,then Pilot Drill all X-Bolt holes using #30" drill. \*\*\*\*DO NOT OPEN AFT CAP HOLES\*\*\*\*\* 7-Open crossbolt holes to 0.3125" (3 per side). Drill pilot holes for wearplates using Dt8868, Use DT8892 FOR REAR WEARPLATE HOLES. 8-Open six rear wearplate holes using DT8892. Open all wearplate holes to 0.297" 9-Open ground wire hole .297" section E-E 10-Open Aft & Fwd Cap holes using .208" drill. 11-Bore out aft end of tube as per Dwg D3507 & Detail "B". 12- Section G-G holes must be laid out manually, open to #30. 13-Debur holes.

170 - 1-Open X-Bolt holes to .375" ( 1 Places ) & .500" (2Places) as per Dwg D3507. and section G-G to .750" (2 places) 2-Counter Sink X-BOLT holes as per Dwg D3507 3-Debur and blow out chips from inside of tube. 4-Bond web as per Dwg D3507 & QSI 015 start time : \_\_\_\_\_ end time: \_\_\_\_\_ 5-Weld x-bolt spacers as per Dwg D3507 and Detail C-C & D-D and G-G 7-Drill Rivet Holes as per Dwg D3507 Using Dt8871A&B 8-Debur Rivet holes.

185 - RE-ALODINE ONLY

190 - 1-Rivet D3506-1/-3 as per Dwg D3507.

210 - Touch-up alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

220 - 1- Apply Primer as per QSI 005 4.2.1.3.3 and dwg A/R Primer Batch: 5152590 2- Paint two coats of White paint as per QSI 005 4.2 and dwg A/R Paint Batch: 5146086

260 - 1- Install Wearplate & Ground Wire inserts as per Dwg D3507. 1-Inspect for Foreign objects 2-Install Fwd & Aft caps as per Dwg D3507 And Detail "A" & "B" 3-Install Wearplates as per Dwg D3507 , Note:Install (1) Bolt and (1) washer on Ground Wire insert on top of tube Do not Install Scews where indicated on Dwg(Note #6) 4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube 5- Wing Walk as per Dwg D3507 and QSI 005 4.4 Batch: 5163430

300 - (Identify as per dwg & Stock Location: \_\_\_\_\_) Identify and pack for shipping as per PPP D135-751-011 PPP Rev: \_\_\_\_\_

305 - Photocopy bluefile & type labels per PPP D135-751-011 CHG002

310 - QC21- Final Inspection - Work Order Release

| Job BOM       |                         |               |                       |           | 009129 |
|---------------|-------------------------|---------------|-----------------------|-----------|--------|
| Part / Item   | Component Name          | Quantity      | Operation             | Container |        |
| D3507-1-BENT  | Skidtube Assembly EC135 | 1 pcs (1 ea)  | 90-Start up Operation | 5145108   |        |
| D3504-1       | Crossbolt Spacer        | 2 pcs (2 ea)  | 170-Skidtubes         | 5146029   |        |
| D3504-3       | Crossbolt Spacer        | 1 pcs (1 ea)  | 170-Skidtubes         | 5105604   |        |
| D3504-5       | Crossbolt Spacer        | 2 pcs (2 ea)  | 170-Skidtubes         | 5091959   |        |
| D3505-1       | Web                     | 1 pcs (1 ea)  | 170-Skidtubes         | 5141185   |        |
| D3506-1       | Doubler                 | 4 pcs (4 ea)  | 190-Skidtubes         | 5149088   |        |
| D3506-3       | Doubler                 | 2 pcs (2 ea)  | 190-Skidtubes         | 5168034   |        |
| MS20601-AD4W3 | Rivet                   | 12 Ea (12 ea) | 190-Skidtubes         | 5147507   |        |
| ALS4-1032-225 | Rivnut                  | 1 Ea (1 ea)   | 260-HandFinish        | 5059809   |        |
| ALS7-1032-130 | Rivnut                  | 38 Ea (38 ea) | 260-HandFinish        | 5045669   |        |
| AN3C4A        | Bolt                    | 31 Ea (31 ea) | 260-HandFinish        | 5152638   |        |
| AN3C5A        | Bolt                    | 2 Ea (2 ea)   | 260-HandFinish        | 5149186   |        |
| AN526C1032R10 | Screw                   | 2 Ea (2 ea)   | 260-HandFinish        | 5071664   |        |
| D2965         | Cap                     | 1 pcs (1 ea)  | 260-HandFinish        | 5045482   |        |
| D2965-3       | Cap                     | 1 pcs (1 ea)  | 260-HandFinish        | 5126369   |        |
| D3492-1       | Plug                    | 4 pcs (4 ea)  | 260-HandFinish        | 5148529   |        |
| D3492-3       | Plug                    | 4 pcs (4 ea)  | 260-HandFinish        | 5137612   |        |
| D3492-7       | Plug                    | 2 pcs (2 ea)  | 260-HandFinish        | 5148611   |        |
| D4918-047     | Wearplate Aft           | 1 pcs (1 ea)  | 260-HandFinish        | 5153202   |        |
| D4918-1       | Wearplate Fwd           | 1 pcs (1 ea)  | 260-HandFinish        | 5148279   |        |
| D4918-3       | Wearplate Center Fwd    | 1 pcs (1 ea)  | 260-HandFinish        | 5148673   |        |
| D4918-5       | Wearplate Center Aft    | 1 pcs (1 ea)  | 260-HandFinish        | 5148680   |        |
| NAS1149C0332R | Washer                  | 33 Ea (33 ea) | 260-HandFinish        | 5148669   |        |
| NAS1611-007   | O-Ring                  | 2 Ea (2 ea)   | 260-HandFinish        | 5103693   |        |
| NAS1611-010   | O-Ring                  | 4 Ea (4 ea)   | 260-HandFinish        | 5106797   |        |
| NAS1611-013   | O-Ring                  | 4 Ea (4 ea)   | 260-HandFinish        | 5106791   |        |
| AN3C4A        | Bolt                    | 8 Ea (8 ea)   | 280-Packaging         | 5080636   |        |
| D3512-041     | Wearplate               | 2 pcs (2 ea)  | 280-Packaging         | 5169981   |        |
| NAS1149C0332R | Washer                  | 8 Ea (8 ea)   | 280-Packaging         | 5143145   |        |

| Job Allocations       |                |          |           |           |
|-----------------------|----------------|----------|-----------|-----------|
| Operation             | Component Part | Required | Inventory | Allocated |
| 90-Start up Operation | D3507-1-BENT   | 1        | 2         | 0         |
| 170-Skidtubes         | D3504-1        | 2        | 28        | 0         |
|                       | D3504-3        | 1        | 6         | 0         |
|                       | D3504-5        | 2        | 14        | 0         |
|                       | D3505-1        | 1        | 14        | 0         |
| 190-Skidtubes         | D3506-1        | 4        | 29        | 0         |
|                       | D3506-3        | 2        | 22        | 0         |
|                       | MS20601-AD4W3  | 12       | 846       | 0         |
| 260-HandFinish        | ALS4-1032-225  | 1        | 947       | 0         |
|                       | ALS7-1032-130  | 38       | 1,990     | 0         |
|                       | AN3C4A         | 31       | 2,016     | 0         |
|                       | AN3C5A         | 2        | 1,446     | 0         |
|                       | AN526C1032R10  | 2        | 57        | 0         |
|                       | D2965          | 1        | 23        | 0         |
|                       | D2965-3        | 1        | 5         | 0         |
|                       | D3492-1        | 4        | 85        | 0         |
|                       | D3492-3        | 4        | 72        | 0         |
|                       | D3492-7        | 2        | 22        | 0         |
|                       | D4918-047      | 1        | 10        | 0         |
|                       | D4918-1        | 1        | 6         | 0         |
|                       | D4918-3        | 1        | 2         | 0         |
|                       | D4918-5        | 1        | 3         | 0         |
|                       | NAS1149C0332R  | 33       | 5,191     | 0         |
|                       | NAS1611-007    | 2        | 240       | 0         |
|                       | NAS1611-010    | 4        | 435       | 0         |
|                       | NAS1611-013    | 4        | 108       | 0         |
| 280-Packaging         | AN3C4A         | 8        | 2,016     | 0         |
|                       | D3512-041      | 2        | 1         | 0         |
|                       | NAS1149C0332R  | 8        | 5,191     | 0         |

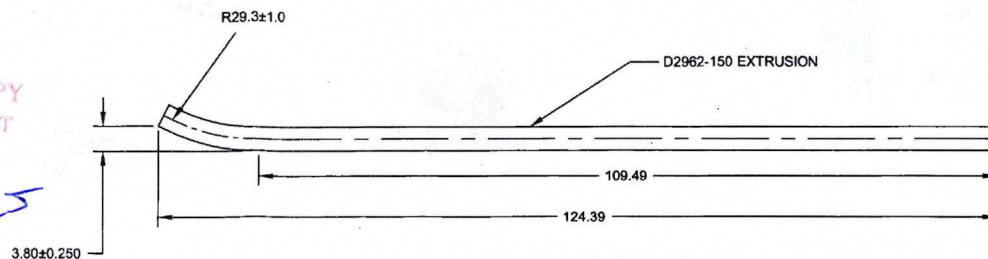


|                                    |
|------------------------------------|
| <b>Part Specifications</b>         |
| Specifications could not be found. |

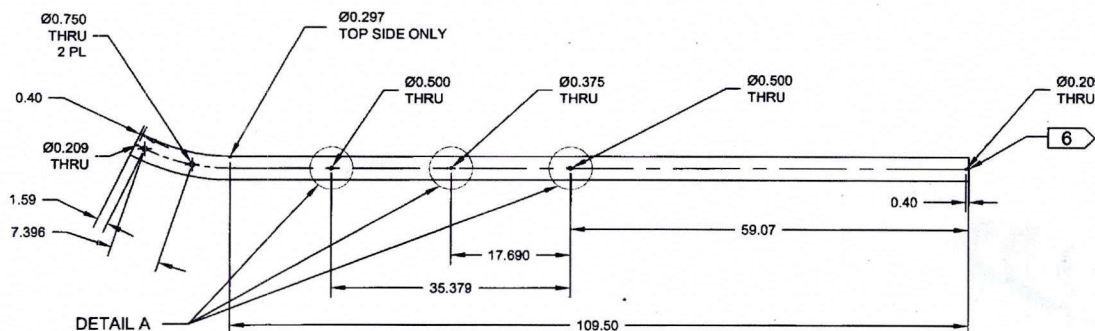
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| Qty | Part Number   | Description       |
|-----|---------------|-------------------|
| X   | D3507-041     | SKIDTUBE ASSEMBLY |
| 1   | D2962-150     | EXTRUSION         |
| 1   | D2965         | CAP               |
| 1   | D2965-3       | CAP               |
| 4   | D3492-041     | PLUG ASSEMBLY     |
| 4   | D3492-043     | PLUG ASSEMBLY     |
| 2   | D3492-047     | PLUG ASSEMBLY     |
| 2   | D3504-1       | CROSS BOLT SPACER |
| 1   | D3504-3       | CROSS BOLT SPACER |
| 2   | D3504-5       | CROSS BOLT SPACER |
| 1   | D3505-1       | WEB               |
| 4   | D3506-1       | DOUBLER           |
| 2   | D3508-3       | DOUBLER           |
| 1   | D4918-1       | WEARPLATE         |
| 1   | D4918-3       | WEARPLATE         |
| 1   | D4918-5       | WEARPLATE         |
| 1   | D4918-047     | WEARPLATE         |
| 38  | AELS-1032-130 | INSERT            |
| 1   | AELS-1032-225 | INSERT            |
| 31  | AN3C4A        | BOLT              |
| 2   | AN3C5A        | BOLT              |
| 2   | AN526C1032-10 | SCREW             |
| 33  | AN960C10L     | WASHER            |
| 12  | MS20601AD4W3  | RIVET             |

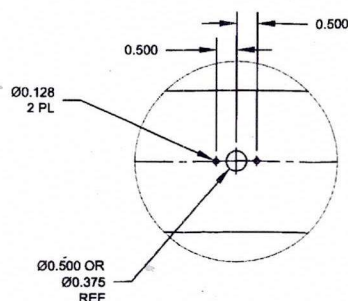
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WORK ORDER  
NO. 19201945  
19-03-14



**D3507-1 BENDING/CUTTING DETAIL**



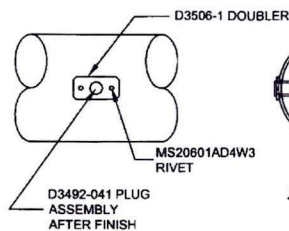
**D3507-1 DRILLING DETAIL**



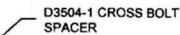
**DETAIL A**  
TYP, 6 PL  
SCALE 3:10

- GENERAL NOTES:**
- 1) MATERIAL: N/A
  - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3505-1 WEB.  
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.  
OPTIONAL: POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTERLINE PER DART QSI 005 4.4 (OPTIONAL)
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) DIMENSIONS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY WITH DART B/N PER DART QSI 044 6.4 (VIBRATING STYLUS) ON I.D. OF TUBE.
  - 7) WEIGHT: 24.1 LB (FROM IIN-D135-751)
  - 8) WELDING TO BE DONE PER DART QSI 004
  - 9) INSERT D3505-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING
  - 10) USE DART DRILL TEMPLATE DT8868 TO LOCATE AND DRILL Ø0.297 HOLES (38 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION C-C (38 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
  - 11) DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS

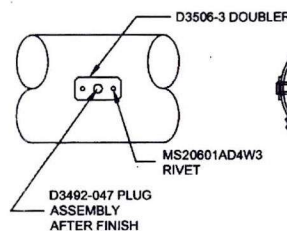
| D          | REMOVE D3568-X GASKETS, D4918-X WAS D3508-X<br>REVISE FINISH TO ADD PAINT AS THE<br>PREFERRED FINISH. REVISED NOTES | DW                                                                                                                                                                                                                                                                                       | 13.08.30     |
|------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| C          | ADD D3504-5, FOR SKID GEAR DEFLECTOR;<br>CHANGE FWD CAP BOLT TO AN526C1032-10 SCREW                                 | DC                                                                                                                                                                                                                                                                                       | 07.09.19     |
| B          | ADD GASKET, CHANGE HARDWARE MAT'L                                                                                   | PH                                                                                                                                                                                                                                                                                       | 06.11.01     |
| A          | NEW ISSUE                                                                                                           | PH                                                                                                                                                                                                                                                                                       | 06.04.21     |
| REV.       | DESCRIPTION                                                                                                         | BY                                                                                                                                                                                                                                                                                       | DATE         |
| DESIGN     | DW                                                                                                                  | <b>DART AEROSPACE USA, INC</b>                                                                                                                                                                                                                                                           |              |
| DRAWN      | DW                                                                                                                  | KENT, WA                                                                                                                                                                                                                                                                                 |              |
| CHECKED    | JP                                                                                                                  | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. D       |
| MFG. APPR. | JP                                                                                                                  | D3507                                                                                                                                                                                                                                                                                    | SHEET 1 OF 2 |
| APPROVED   | JP                                                                                                                  | TITLE                                                                                                                                                                                                                                                                                    | SCALE        |
| DE APPR.   | JP                                                                                                                  | EC 135 SKIDTUBE                                                                                                                                                                                                                                                                          | NTS          |
| DATE       | 13.08.30                                                                                                            | COPYRIGHT © 2013 BY DART AEROSPACE USA, INC<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |              |



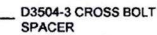
**SECTION C-C**  
(SCALE 3:10)



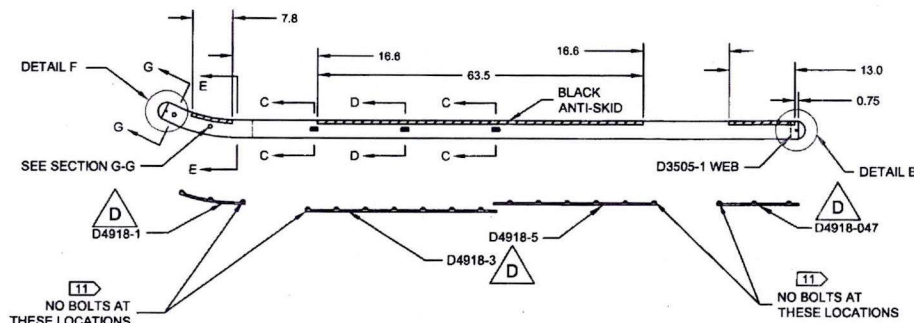
- AFTER BENDING AND DRILLING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.500 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D3504-1 CROSS BOLT SPACER 2 PL
  3. WELD INTO PLACE AND GRIND FLUSH
  4. IF REQUIRED, PASS Ø0.404 (1/8" DRILL) THRU HOLE
  5. INSTALL D3506-1 DOUBLER 4 PL USING MS20801AD4W3 RIVET 8 PL
  6. AFTER FINISH, INSTALL D3492-041 PLUG ASSEMBLY 4 PL



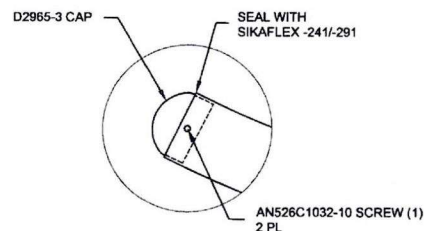
**SECTION D-D**  
(SCALE 3:10)



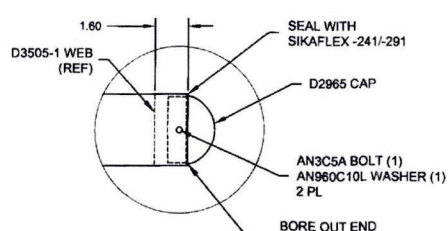
- AFTER BENDING AND DRILLING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D3504-3 CROSS BOLT SPACER 1 PL
  3. WELD INTO PLACE AND GRIND FLUSH
  4. IF REQUIRED, PASS Ø0.277 (1/8" DRILL) THRU HOLE
  5. INSTALL D3506-3 DOUBLER 2 PL USING MS20801AD4W3 RIVET 4 PL
  6. AFTER FINISH, INSTALL D3492-047 PLUG ASSEMBLY 2 PL



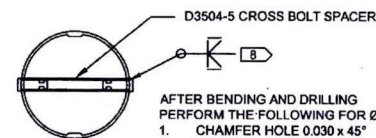
**D3507-041 ASSEMBLY DETAIL**



**DETAIL F**  
(SCALE 1:5)

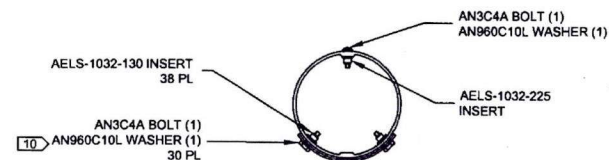


**DETAIL B**  
(SCALE 1:5)



**SECTION G-G**  
(SCALE 3:10)

- AFTER BENDING AND DRILLING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.750 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D3504-5 CROSS BOLT SPACER 2 PL
  3. WELD INTO PLACE AND GRIND FLUSH
  4. IF REQUIRED, PASS Ø0.594 (1/8" DRILL) THRU HOLE
  5. AFTER FINISH, INSTALL D3492-043 PLUG ASSEMBLY 4 PL



**SECTION E-E**  
(SCALE 3:10)

RELEASED  
2013-12-10

|                                                                                                                                                                                                                                     |          |                                             |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                              | DW       | <b>DART AEROSPACE USA, INC</b>              |              |
| DRAWN                                                                                                                                                                                                                               | DW       | KENT, WA                                    |              |
| CHECKED                                                                                                                                                                                                                             | GP       | DRAWING NO.                                 | REV. D       |
| MFG. APPR.                                                                                                                                                                                                                          |          | D3507                                       | SHEET 2 OF 2 |
| APPROVED                                                                                                                                                                                                                            |          | TITLE                                       | SCALE        |
| DE APPR.                                                                                                                                                                                                                            |          | EC 135 SKIDTUBE                             | NTS          |
| DATE                                                                                                                                                                                                                                | 13.08.30 | COPYRIGHT © 2013 BY DART AEROSPACE USA, INC |              |
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Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |



## Change Record

PAGE 1 OF 1

Part Number: D135-751-011

Description: SKIDTUBE

[illegible]